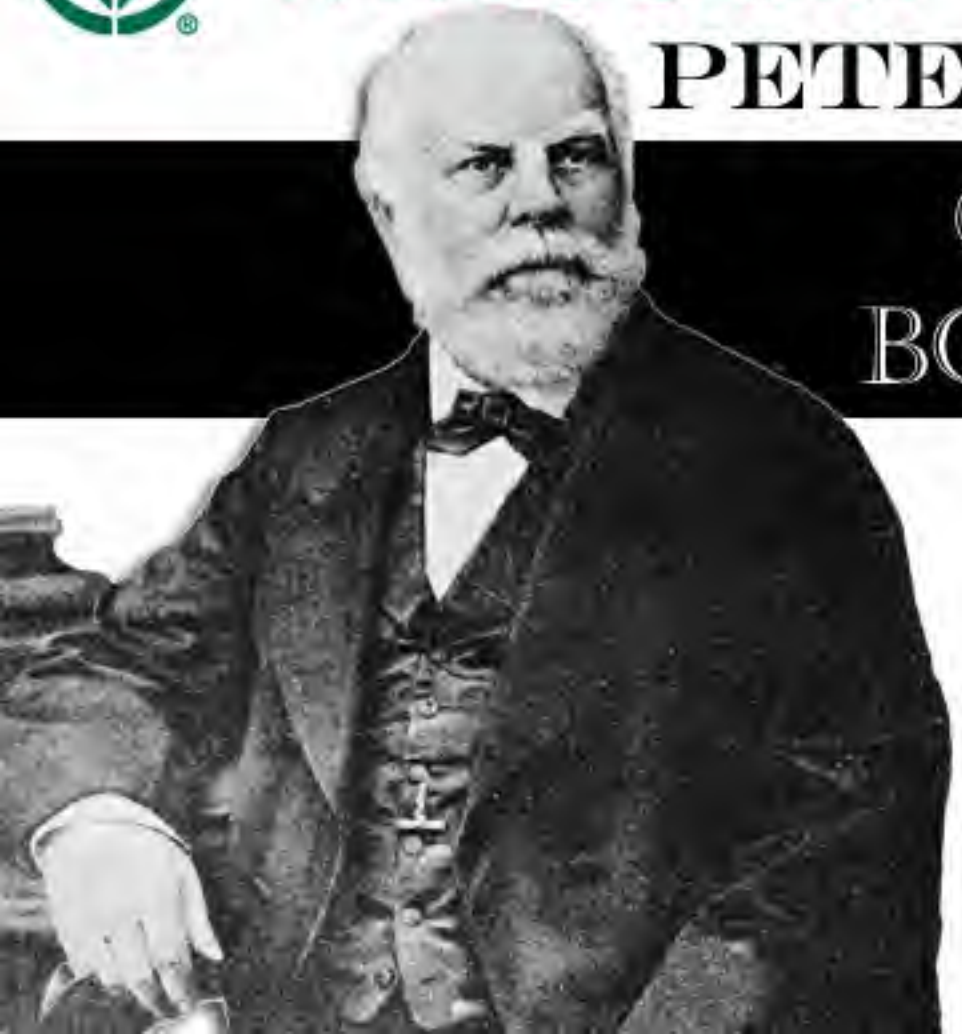
Missouri Botanical Garden
Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Notes

p. 6

Brown (Jour. Linn. Soc. Bot. vol.) 1862 speaks of 6 with Stamens 5 perig — but without naming them. It must be Cacaotia Brownii; placida, Asperi Cayelensis — which of the 6th?

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13932

CLOSING SALE 79 CITY LOTS

AUG. CHOUTEAU SUBDIVISION.

WEDNESDAY, OCTOBER 10TH.

Last spring the owners of the "*Market Street and Chouteau*

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Acer Nov 16'
Am Nov 22 & 29
Dr George Engelmann.

Boston Nov 13. 1867

My Dear Sir

You will in a few days receive a package which contains my collection of Isoetes made this season. It will I hope give you some idea of the condition of these plants at different periods during the summer and autumn. I have not had time to make collections as often as you perhaps would desire, but I have gathered specimens at 23 different times, besides one or two visits when I got nothing, and these may be in some degree supplemented by my last years collections. I have been at some other ponds Dedham & the Two Sisters but found without discovering any Isoetes in them. If I remember rightly, I have this season found no Isoetes emersed, except some small specimens of I. Engelmanni in Alewife brook

that are uncovered at low tide. In the summer the rain fall was unusually great and our ponds and streams were very full. In autumn the dry weather reduced the level of the water to its average state. The small round pond in Woburn where I. Eclimorshora Bootii grew was as low as it was when I found that plant growing very abundantly in deep water, yet this season I have found it scarce and only in deep water.

Some two or three years ago I got some fine specimens of I. Engelmanni growing in deep water on Arlington Brook, when the water was drawn off for repairs of a Mill Dam. The specimens gathered this year in the same spot in 3 feet of water are small. The best of that species I have found this year have been in very shallow water.

There was from 3 in to a foot of water over the fine specimens of I. Muricata from Pout Swamp. The brook there flows into Concord

River, and then into the Merrimack
At Fish Pond and at Spot Pond, the bottom
is so covered and hidden by the luxuriant
growth of other water plants, that Isoetes
cannot be seen; and this will account for
my meagre contributions from those sources.
You will find some very fine specimens
of I. Tuckermanii from a new locality
Shy Pond. This pond is within a mile of
Mystic Pond, and its outlet discharges its
waters into Alewife Brook which runs
from Fresh Pond into Mystic River, less than
a mile below Mystic Pond.
I am disappointed at not having collected
Specimens from a wider area, but this I
may be able to effect another season. Such
as my Collection is I send it in the hope
that it will be of interest to you.
You will find in the package Sagina
Nivea an inhabitant of the small wood
pond in Woburn with Isoetes Bootii, and
growing no where else in this neighbourhood
as far as I know, although Dr Gray has received

At this year, for the first time. from near
It grows in from 2-3 feet of water. It wa
late in the season when I discovered it
it was covered with slime. and could
be cleaned, and so little it could be
got in bits. Next year I will get it
and send you good specimens in the stam
flowers, if it be really monoecious.
I believe that I have told you that
name of West Cambridge has been cha
to Arlington
I have not acknowledged the rece
the Wolffia which you kindly sent
Dr Robbins some years ago collected a
Wolffia in N. England, but I have
seen it.
I am very sorry that you did not
the expectations you held out in you
letter, of coming to Boston, for I sh
have had very great pleasure in sh
you, and in introducing you to the
for whom you have done so much
Very truly Yours
W G Farlow

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N. Brunsw. North Am. Boott 1865

D. riparia Rehd. & Glei Jan Jerseys
D. Eupatorium: Adams Englemann
? Leeka Pa. Moser
Schkuhriana Wiegmannsegg Englem.
N. Eaton Clinton
? Mystic River: Medford, Mass
Fuckerm.
? Woburn, Mass Wm Boott

D. Canadensis macrospora Echo Lake Gaylussacia
no spores!
White Mts, Fuckerm.
1 spore!

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Isoetes echinospora Duer.

Feldsee, Spenner
Titisee (Hillebrand)
Auvergne
Wales
Lapland
Greenland.
Finland
Lago d'Orta

Fr. Braun
1865

Isoetes Lacustris L.

Holstein
Mecklenburg.
Hamburg
Bremen
Danzig
Ostenburg
Bochumerwald
Schwarzwald
~~Lago d'Orta~~

13435

JONES & LEITCH DRUGGISTS

COR. FIFTH & MARKET STREETS,

ST. LOUIS, MO.

McKittrick & Co. Gr. Main & Vine.

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List of species of Isoëtes sent
Dr. Engelmann Dec. 24th, 1866, by S.W. Robbins

1st With. leaves recurved

Sect — lacustres

1 Isoëtes Hubbsiae, many years since.

2 Braunii (smaller) Utah, 1845?

3 lacustris Utah. Jan. 18th 1845

4 Braunii small & muchshaved, in a shallow pool communicating with the Blackstone river, Utah., Aug 30/1865
also in Hb Gray

5 Braunii Natucket pond, Grafton, Mass., July 27, 1866

6 Braunii Mill pond, 2-3 ft. Utah., Dec. 30 & 31, 1866

7 riparia Feather sandy, not deep still part of a small stream, Utah, 1851

8 riparia Utah., 1843?

9 riparia " , 1845? in a mill pond, 5 ft.

10 riparia " " var longifolia

11 riparia " 1848

melanospora

12 " " Said to be n. sp. (anct.?) Ware, Mass. at Ringwood Ill.

My spec. deficient. Seems a large sporeonly

13 Engelmanni, gracilis
Shallow mountain stream, gravelly bottom, Colebrook,
Ct., Oct. 10, 1864 also in Hb Gray under Hubbsiae

14 riparia Mill pond, Utah 2-3 ft. with Drob, Dec. 30 & 31, 1866

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Isoetes compar Vol 20

Mettenius in Linnaea 1847. p. 269 ca

Mettenius, Azolla

Linnaea XX. 1847

p. 259

Tab 2 & 3

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Boston localities near Boston
examined by Wm Boott 1867

1.	Arlington (formerly West Cambridge)	Spy pond,	north side	Sept 5	J. Tuckermani ! ! good !
2.			south side	" 5	J. Braunii young, small, mostly sterile
3.			" "	" 9	same
4			in 3 feet water east side	" 9	J. Tuckermani " unusually large, splend
5		Alewife Brook (outlet of fresh pond into Mystic)		Nov 3	J. Engelmanni ? very young & small sterile, stomata !
6		ditch near it		" 3	J. Engelmanni, large sterile — stomata !
7		Arlington Brook [Station 5 of last year]	1866 Engle	Sept 12	J. Englemanni small sterile
8		above Station 5		" 12	J. Englemanni slender, mostly sterile
9		Station 6 of last year	1866 Englem	Oct 23	J. Englemanni small sterile
10		near Station 6		" 23	J. Englemanni ordinary form good
11	Cambridge, Fresh Pond	north side		Aug 20	J. Caccutii good
12		west side		Sept 17	J. Braunii good
13	Mystic Pond	north side		Aug 9	J. Tuckermani immature
14		"		Oct 28	" same perfect !
15 a		east side		July 14	same, immature, but distinct
b				" 14	— same — same
16 c			(mixed with a sad looking very much like it)	Aug 9	J. Braunii immature but distinct
c					J. Tuckermani, rather young
17		"		Sept 8	J. Braunii good forma humilis
18		"		Oct 28	J. Tuckermani newly passed
19		South east side (Station 2)		June 14	J. Braunii ? no sporos
20		1866 Braunii		July 4	— — — very immature
21				July 14	— — — but distinct
22				Aug 9	— — — recognized by the
23		South end 1866 Tuckerm.		June 2	J. Tuckermani old sporos — — — immature
		South west side mouth of Arlington Brook			no sporos of this season — recognized by the old ones adhering
24				June 2	J. Braunii do do do
25		West side		June 2	J. Tuckermani do do do
26				Aug 9	— — immature
27				Sept 1	J. Braunii, immature
28	Mystic River,	in tide water		Nov 3	J. Tuckermani. sporos mostly fallen off.
29	Woburn brook	(Station 1 of last year)		June 9	T. muricata no sporangia yet, old sporos adhering
		1866 T muricata		July 14	— — immature but sufficically developed
30				Aug 25	— — fully mature
31				Octob 20	— — fronds & leaves fallen off.
32					

Over

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WCS

Locales near Boston examined by W. Boott 1867

Horn Pond, Middle of west side (old station 7)

33		I. Braunii (a mistake ÷ date ??)	July	11	I. Tuckermani good! almost mature!
34			Sept	15	same, almost past but very good
35	South end, (Station 8) 1866 I. Tuckermani		June	30.	— — old spors adhering very ripe too small — mostly sterile
36			July	11	— — very immature but recognizable
37	North end		"	11	— — immature, but good enough
38			Sept	15	— — over ripe petals leaves fallen off
39	Island in middle pond		July	11	I. Braunii, very immature old spors adhering.
	Small round pond in Woburn, without outlet (Station 4)				
40			Aug	11	v. Bootii good!
41	1866 I. Bootii all submerged scarcely any stouts		Sept	8	— — good!
42			"	23	— — almost past
43			"	29	— — — —
44			Oct	20	— — — only few microspori remain
45	Pot pond, Stoneham 1866 I. muricata		July	23	I. Braunii (=Tuckermi) filiis terminalibus with good old adnexa spinulas at confluent spors
46	Bootii in Tofit Swamp, Lexington		July	17	v. ~~muricata~~ Bootii immature
47			Sept	9	— — perfect habit & muricata spors of Bootii

47 different sets of specimens

collected June 2. 9. 14. 30.
July 4. 11. 14, 17. 23
Aug 9. 11 ~~19~~ 20 25
Sept 1. 5. & 9. 12. 15. 17. 23. 29.
Oct 20. 23. 28
Nov. 3

139938

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Species of Isoetes collected about Boston
by Wm Boott. June 2 to Nov 3d – 1867

Isoetes Lacustris north side of Fresh Pond Aug 20th mature

Isoetes Tuckermanii echinospora, var Bonnetii.

June 2d South & west side of Mystic Pond undeveloped no new spores.
June 30. south side of Horn Pond new spores too young to recognize
July 11 South & north end of same spores much too young but can be recognized
" west side of same, almost mature
a mistake in date? (" 14 East side of Mystic Pond very young but can be recognized.
Aug 9. north, east, south & west side of same immature but well developed.
" west side of same nearly mature
Sept 9. Spy Pond perfect.
" 15 Hornpond, west & north side almost perfect
Oct 28 Mystic Pond north side nearly perfect
" " east side nearly perfect
Nov 3d Mystic River about passed.

Isoetes echinospora var Bonnetii

June 2d Mystic, S.W. side, no spores visible
— 14 " SE side — — —
July 4 " " very immature, but sufficiently distinct
— 11 Hornpond, on island very immature scarcely recognizable
— 14 Mystic east side immature, but distinct
— 23 Spot pond very immature scarcely recognizable
Sept 5 Spy pond very young, mostly sterile
— 1 Mystic, west side immature
Sept 8 — east side good
Sept 17 Fresh pond very good

Isoetes echinospora var muricata

June 9 Woburn Brook no spores visible
July 14 — — — immature but sufficiently distinct
Aug 25 fully mature
Oct 20 almost past

OOO

Deer Isoetes near Boston 1869

Isoetes echinospora var Bootii

transition to immature	July 17.	Brook in Tofil swamp.	immature
	Sept 9	— — —	perfect
	Aug 11	Small round Pond in Woburn	good
	Sept 8	— — —	good
	— 23	— —	almost past
	— 29	— — —	almost past
	Oct 20	— — —	only a few microsp. sporangia remain

Isoetes Engelmanni

	Sept 12.	Arlington Brook	small & mostly sterile
	Oct 23	— —	perfect
	Nov 3d	Alewife Brook	poor & sterile

Isoetes all species begin to develope spores towards the end of June

— In July the spores, though immature, can be recognized by the spores

— From the middle of August to the middle of Sept they appear to be in the most perfect condition

In August, Boott found Lacustris muricata and Bootii in perfect maturity

In September Tuckermanii & Braunii

In October Engelmanii and sometimes Tuckermanii

Bootii seemed to be earlier than the others, for it leaves fully off in the latter part of September

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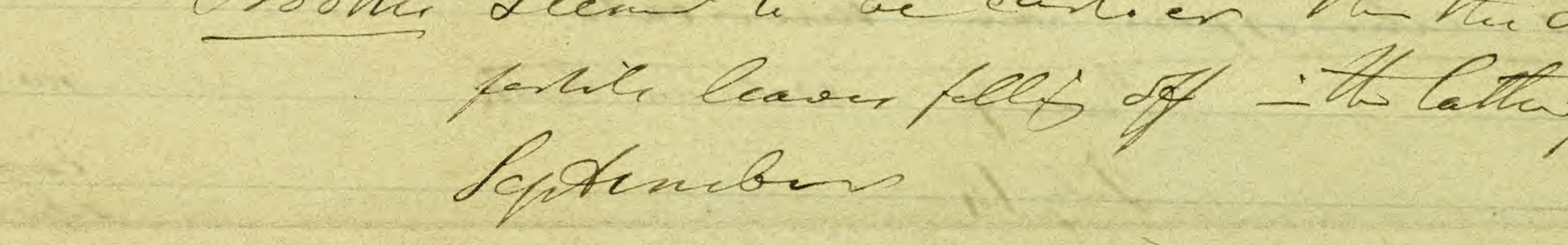

Isoetes lacustris vera fide Durieu
Sault de St Marie Lake Superior
Porter & Sayre Aug 1865
24, 27

Isoetes Americana

Oct 1865

{ I. lacustris ? 17.....
{ I. macrospora Dur } 1864
I. riparia Lag 1846.
I. Engelmanni Braun 1846
{ I. Braunii Dur = ? 1864
{ I. muricata Dur } = echinospora ? 1864
I. melanopoda Gay 1864
I. flaccida Shuttlew. 1846
Braun

I. echinospora Durieu 1860 Bullet VIII. p. 164

13940

an Syl 4

Pleasant Hill Mo

Sept 1 — 1865

Dr Engelmann

Dr Sir

Inclosed find a
small but beautiful flower
growing on Prairies — very rare
almost Everywhere —

Also a white Desmodium

Yours &c

G. C. Broadhead

Desmodium —
Polygala viridescens

A Braun ÷ Ett. (11 Febr 1867)

proposes the following arrangement for the Desmids

A without peripheral bud bundles (all (N Am) submerged or estuarine)

2 lobed chrom. Volum incomplete

a no stomata

1. D. pygmaea

2. D. Boutrii mucronata

3 D. muricata (here the Europ D. echinospora var)

b. very few stomata

4 D. (echinospora) ambigua [my Braunii]

c. Stomata abundant

5 D. Bailii

6 D. saccharata

7 D. Orlandii

8 D. Tuckermanii

9. D. riparia

B with peripheral bud bundles all with stomata, 2 lobed amphichroic

(not continued!)

2 and 8 pores a, vol incomplete

10 Englemanii

11. melanopleura

12 Bütleri

b. vol complete

13 Melanosporum

14 Floridae & Chapmanii.

15 Nuttallii

18941

Isoetes ~~Kaeuchi~~ Japonica Jermy. $\frac{\cancel{37}}{\cancel{60}} - \frac{37}{60} = 0.61^{mm}$

— — Echolaka $\frac{\cancel{40}}{\cancel{60}}$ $\frac{41}{60}$ 0.68^{mm}

— Nipponica Rhiad. $\frac{34}{60}$ $\frac{30-37}{=60}$ $0.50-0.60 = 0.57$

— Braunii? Wittpeseay $\frac{\cancel{26}}{60}$ 0.43

— Engelmanni Altonis $\frac{30}{60}$ 0.50

— — Orlavare $\frac{\cancel{26}}{60}$ 0.43

Size of spores

I. Canadensis 0.60 mm
I. echinospora 0.80 mm } A. Braun p. p.

13942

JONES & LEITCH,
WHOLESALE DRUGGISTS
COR. FIFTH & MARKET STREETS,
ST. LOUIS, MO.

J. McKittrick & Co. Cor. Main & Vine.

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Aug. 1865, con. - Nov

Isoetes lacustris (Schwarzwald.) Sporidia majuscula fusiformia - reticulata 0.60 mm diam (0.28 lin) folia 5-14 - cuneata. 2-5½ poll. longa

I. lacustris (Echolake) Sp. majora, fusiformia - reticulata, 0.68 mm diam (0.32 lin) folia 8-11 cuneata (3½-4½ poll) longa

I. riparia (Phila) Sp. majuscula, grosse fusiformia - conspersa 0.50-0.60 (-0.87) mm diam. 0.25-0.30 lin) - folia 9-15-19 cuneata. 4 (3½-6-8 poll) longa.

I. riparia? echinospora (Wissahickon) Sp. minora tenuiter fusiformia - conspersa 0.43 mm (0.21 l.) diam. Folia 5-6 cuneata (2-2¼ poll) longa lute viridia tenuia

I. Engelmanni (Akron) Sp. minora tenuiter reticulata 0.48-0.50 mm (0.24 l) diam. Folia 20-30 cuneata (8-12 poll longa

I. Engelmanni (Delaware) Sp. minora tenuiter reticulata 0.43 mm (0.21 l.) diam folia 25 cuneata (10 poll) longa

I. (Cambridge) Sp. minora grosse fusiformia - conspersa 0.44-0.53 mm (0.21-0.25 l.) diam. Folia 25-28 cuneata (10-11 poll) longa.

I. echinospora (France, Guy)

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Diameter of Spores millimet.	Diameter of Spores lines	Length of Leaves millimet.	Length of Leaves inches
0.60 0.56–0.65	0.28 0.27–0.31	5–14	2–5½
0.68 0.72–0.79	0.32 0.35–0.38	8–11	3½–4½
0.50–0.60 0.43–0.68 mostly 0.55	0.25–0.30 0.21–0.32 mostly 0.26	9–15–19	3½–6–8
0.43 0.41–0.46	0.21 0.20–0.22	5–6	2–2¼
0.48–50 0.43–52 0.49	0.24 0.21–0.25 0.23	20–30	8–12
0. 0.43 0.37–0.46	0.21 0.18–0.22	25–	10
0.44–53 0.40–53	0.21–25 0.18–25	25–28	10–11
0.[illegible]0.47 0.44–0.47	0.21–0.23		

18943

Species in Brown's Species Artes
der Insel Sardinien

I. laciniata Lin p. 554. 555. 557. 558. 559. 560. 561. 562 563. 564

"

I. echinosperma Dur p. 555. 557 558. 560. 562. 563. 564

I stenacea Boiss p. 554. 558. 560.

I. Coromandeliana Linf. p. 554

I. Hystrix Dun p. 554. 559. 560. 561. 562. 564. 565

var. subinermis p. 555

I. Durieui Bory p. 554. 561. 564. 565

I. adspersa Ard. p. 554

I. velata A Br p. 554. 560

var sicula p. 554.

I. longissima Bory p. 554 565

I. Perralderiana Dur & Letourn. p. 554

I. tenuissima Boreau p. 554. 557. 562

I. Boryana Dun p. 555

I. Malinverniana Cesc & Notar. p. 555. 558. 562. 563. 564.

I. dubia Jenn. 555. 556. 560. 561

var maculosa 555

I Fegulensis Jenn. 555 556. 558. 560. 561. 562. 564. 565.

I. gymnocarpa Jenn 555 556.

I. Baetica Willk 555. 565

I. Japonica 558. 561. 562

I. Gardneriana 558

I. Englmanni 558, 562

I tripus 559

I. Orchyglossa

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